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## APPENDIX

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OCS leases produce about 1.3 million barrels of oil per day, and MMS calculates that since 1980 less than 0.001% of the oil produced in the OCS has spilled.

### Exploration and Development Timeline

Companies are required under government leasing regulations to develop a lease expeditiously (between five- and 10-year terms depending on the area and water depth) or return it to the government. In general, leases not producing by the end of their term are relinquished back to the government, which can then re-lease them. All the capital spent by the company to acquire and keep the lease is lost if the lease is returned to the government.

The time line from lease to production in the OCS can vary from four to ten years depending on water depth at the lease location, the drilling depth needed to reach the target reservoir, the distance from shore and from infrastructure, the geological characteristics of the reservoir and complexity of production facilities design. In general for deepwater leases, from purchase of the lease to first production can take anywhere from 7 to 10 years in areas that have existing infrastructure. In this context, the timeline for OCS exploration and production can include:

- Six months to a year for MMS administration and execution of lease sales in unleased areas.
- One year for preliminary geological investigation and selection of areas of interest for additional seismic data acquisition.
- One year to two years to acquire and to process 3D (and new wide azimuth) seismic data, and to identify drillable prospects from this data.
- As much as a year or more to contract and schedule a drilling rig.
- Six to 10 months for drilling and completion of an exploratory well.
- Six months to a year for follow up evaluation of drilling results, which can include drilling a sidetrack well.
- Another two to three years for additional delineation drilling, and formulation of a plan for reservoir development if the exploratory well proves successful. During this time, the company also is working on pre-permit studies, permitting, and design and procurement for production facilities, including surface and subsurface equipment and systems,
- One year or more for facilities installation, followed by development drilling, which may take from one to two additional years. During this period, the company is involved in design, permitting, engineering, procurement and installation of a pipeline or offshore mooring system to bring the production to market.

## THE MARINE WORLD OF NORTH CAROLINA AND HYDROCARBON EXPLORATION

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### North Carolina Marine Ecosystems

No short summary can do justice to a marine ecosystem as large and diverse as that within and off of North Carolina. North Carolina's placement in moderate latitudes facilitates mixing of a great variety of northern and southern biota. The state also has a very long and complicated coastline, especially if the numerous convoluted bays, rivers, and estuaries are counted. Within this large estuarine and marine system is a huge diversity of habitat types, such as reefs, oyster beds, grass beds, a wide variety of soft substrata bottoms, Sargassum, corals, and even artificial structures (wrecks, pilings, jetties). The numerous habitats, large rivers and estuaries, long coastlines, and moderate climate all